

REMARKS

Responsive to the Official Action of April 28, 2003, reconsideration of the rejection of the claims is respectfully requested.

Claims 1-8 were rejected as anticipated by BRIEF et al. 6,205,501. The reference does not disclose all of the claimed limitations and reconsideration and withdrawal of the rejection are respectfully requested.

Claim 1 includes a functional circuit that is connected to a token storage memory for fetching an IN token from the token storage memory and holding the same. The functional circuit is connected to a packet type judging circuit for receiving information about the type of return data packet, so that if the return data packet is a NAK type, then the functional circuit automatically transmits the IN token held therein to a universal serial bus function repeatedly until the return data packet is either a DATA type or a STALL type, then the functional circuit cancels the held IN token.

This is not disclosed in BRIEF et al. The Official Action points to column 5, lines 9-11 and 55-64. As set forth therein, Brief et al. disclose that when the controller receives an IN token of a control read transfer, the controller automatically sends a NAK if the endpoint pipe state logic indicates that the endpoint pipe does not contain data and

automatically sends the data if the endpoint pipe state logic indicates that the endpoint pipe does contain data.

The undersigned has very carefully considered this citation, as well as the remainder of the reference, and there is no mention of a situation if the return data packet is a NAK type, then the functional circuit automatically transmits the IN token held in the functional circuit to a universal serial bus function repeatedly until the return data packet is either a DATA type or a STALL type, at which point the functional circuit cancels the held IN token. Column 5, lines 55-64 refers to automatically sending a NAK (not a held IN token) if a logic circuit indicates that the endpoint pipe has no data. Presumably, using a logic circuit in this manner saves the resources and time that would otherwise be needed to check whether the endpoint pipe has data. There is absolutely no mention in the reference of sending an IN token repeatedly until the return data packet is a DATA or STALL packet.

In order to sustain a rejection under §102, the reference must disclose every feature claimed. BRIEF et al. do not disclose sending an IN token repeatedly until the return data packet is a DATA or STALL packet and thus claim 1 avoids the rejection under §102. The Official Action implicitly acknowledges that the reference does not disclose this feature by stating that "Brief discloses controller control transfer and

automatically responds, controller automatically sends a NAK if pipe does not contain data and controller automatically sends data if pipe does contain data." This statement points out that the controller automatically sends a NAK, not a held IN token as is required by the claim. The controller in BRIEF et al. automatically sends a NAK at some point, but this is not what is claimed. The §102 is inappropriate and should be withdrawn.

Indeed, the device in BRIEF et al. is similar to the admitted prior art in that there is no provision for repeated transmission of a held IN token. The invention in this reference is related to the use of buffers by the endpoints (the USB functions) and apparently avoids the need for specifically assigned buffers. As in the admitted prior art, the response to an IN token is an ACK packet if the endpoint is ready, a NAK if the endpoint is not ready, or a DATA or STALL packet in other situations. There is no indication in the reference that the return of a NAK packet from the endpoint causes transmission of another IN token from an evaluation unit in which the IN token has been held.

Claim 6 includes a timing controller connected to an oscillator for receiving a clock signal and connected to an EOP detecting circuit for receiving an EOP detecting signal that represents an end of the return packet. The timing controller is also connected to a packet type judging circuit for receiving

information about the type of return packet, and to an IN token holding circuit for controlling the holding and transmission of the IN token by the IN token holding circuit. If the return packet is a NAK and the timing controller receives both the return NAK packet and the EOP detecting signal, then the timing controller allows the IN token holding circuit to transmit the IN token held therein to the universal serial bus function repeatedly until the return data packet is either a DATA or STALL type, at which time the timing controller instructs the IN token holding circuit to hold the IN token therein.

The undersigned has very carefully considered each of the citations offered against claim 6 in the Official Action and finds no mention of a timing controller that performs these functions. Specifically, there is no timing controller that, upon receipt of a NAK packet, allows the IN token holding circuit to transmit the IN token held therein to the universal serial bus function repeatedly until the return data packet is either a DATA or STALL type, at which time the timing controller instructs the IN token holding circuit to hold the IN token therein. BRIEF et al. never automatically send a held IN token repeatedly, under any circumstances and thus the reference cannot anticipate the claim. The Official Action repeats the claim language when asserting the anticipation, but the words of the reference do not support the rejection.

As previously noted, claim 8 is in "means-plus-function" form and invokes interpretation under §112, sixth paragraph. The corresponding structure is described at pages 17-25 of the present application. BRIEF et al. do not disclose or suggest the same or equivalent structure for performing the function claimed and thus claim 8 avoids the rejection under §102. The Official Action does not point out structure in the reference that is the same as, or equivalent to, the claimed means-plus-function limitations. As an example, the reference does not perform the function of automatically transmitting the IN token repeatedly until the return data packet is a DATA or STALL type, and thus there is no equivalent structure. The rejection of claim 8 under §102 is improper and should be withdrawn.

In view of the foregoing remarks, it is believed that the present application is in condition for allowance. Reconsideration and allowance are respectfully requested.

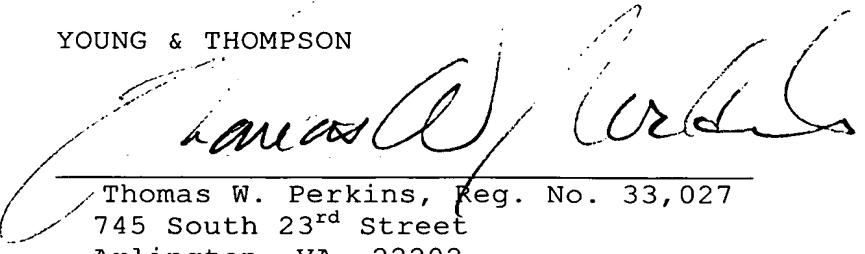
The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

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overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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TWP/lk